The THeMis Engineering Notes from the Drone Bible. Peter Brusso.

The Milrem Robotics THeMIS has no Armour in its base configuration. That is not an oversight. It is a deliberate engineering decision, and understanding why it is the correct decision tells you something important about how autonomous systems change the economics of ground warfare.

A conventional armored logistics vehicle is designed to protect its crew. The armour adds weight, cost, and complexity — but the crew justifies every kilogram of it, because the crew is irreplaceable.

The THeMIS has no crew. The engineers at Milrem made a direct trade: remove the crew, remove the justification for armour, reduce the weight, reduce the cost, increase the payload fraction, and accept that the platform is expendable if the mission demands it.

In Ukraine, the THeMIS has been running logistics and CASEVAC missions since August 2022. Seventy vehicles on the frontline. Two confirmed lost in combat. One destroyed by an FPV drone strike.

Two vehicles lost. Zero crew casualties from those missions. The armour question answers itself.

A destroyed THeMIS costs three hundred thousand dollars and a day's production time to replace. The Tallinn facility builds five hundred of them per year. The loss rate of approximately three percent over three and a half years of high-intensity combat is operationally acceptable. No armour was the right answer.

The engineering principle generalises. When you remove the crew from the most dangerous phase of an operation, you change the survivability requirement for the platform. The design follows the doctrine. Send the machine into the minefield, not the engineer.

Two THeMIS vehicles lost in Ukraine means two soldiers who went home. That is the correct metric.

The THeMIS data card is available free on Archive.org. Link in the description.